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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,685	10/17/2003	Seung Hyun Yi	2080-3-184	2605

7590 04/01/2004
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EXAMINER

NGUYEN, LINH M

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,685	Applicant(s) YI, SEUNG HYUN	
	Examiner Linh M. Nguyen	Art Unit 2816	<i>aw</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-18 are presented in the instant application according to the Applicants' filing on 10/17/2003.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because of the following informality:

Figure 1, box 200, "contral" needs to be changed to --control--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker et al. (U.S. Pub. No. 2002/0180501).

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With respect to claim 1, Baker et al. discloses, in Figures 12 and 13, a circuit for correcting a duty factor of a clock signal comprising a) a phase comparator [1214] for detecting a phase difference of an input clock signal [[CLKin]; col. 2, [0027], [0028]; col. 5, [0058, line 1-3]] having a duty factor to be corrected, and a corrected clock signal [CLKout] having the duty factor corrected, and generating a shift control signal [output of 1214]; b) a control signal generating part [1212] for shifting a clock generating reference signal in response to the shift control signal, and delaying the clock generating reference signal [CLKin] for a preset time period to generate 180° and 360° clock generating control signals; and c) a clock signal generating part [1204, 1205, 1206, 1207] for generating a clock signal having a corrected duty factor according to the 180° and 360° clock generating control signals.

With respect to claim 2, Baker et al. discloses, in Figures 12 and 13, that the corrected clock signal provided to the phase comparator is corrected such that a duty factor thereof is 50% [Fig. 13].

With respect to claim 3, Baker et al. discloses, in Figures 12 and 13 (*and Fig. 3A*), that the control signal generating part shifts the clock generating reference signal in left/right direction (*see Fig. 3A, output of phase detector 302*).

With respect to claim 4, Baker et al. discloses, in Figures 12 and 13, that the control signal generating part delays a preset time period set according to a shifted position of the clock generating reference signal.

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Allowable Subject Matter

5. Claims 5-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art on record does not show or fairly suggest:

- The circuit, in which the control signal generating part includes a) a first delay loop for delaying the synchronized clock generating reference signal for a preset time period, to provide a 180° clock generating phase signal, and b) a second delay loop for delaying the synchronized clock generating reference signal for a preset time period, to provide as a 360° clock generating phase signal, as called for in claim 5; and

- The circuit, in which the clock signal generating part includes a) a correction delay for delaying the 360° clock generating control signals, b) a first pulse signal generator for generating a pulse signal in response to the 360 clock generating control signal delayed at the correction delay, c) a second pulse signal generator for generating a pulse signal in response to the 180° clock generating control signals, as called for in claim 10.

Citation of Relevant Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Lin et al. (U.S. Pub No. 2002/0172314) discloses a phase splitter using digital delay locked loops.

Prior art Alon et al. (U.S. Patent No. 6,642,760) discloses an apparatus and method for a digital delay locked loop.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is (571) 272-1749. The examiner can normally be reached on Alternate Mon, Tuesday - Friday from 7:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh M. Nguyen
Examiner
Art Unit 2816

LMN

